The following article on "A Valuable Famine Food" extracted from the Indian Trade Journal of the 19th March 1908, is published for the information of the public :—

"In a country so liable to the visitations of famine as India undoubtedly is, the question of suitable famine foods on which very large numbers of people might in comparative comfort tide over a lean year is a matter of some importance. It is true that practically all the edible products of this country have been examined in a more or less general way from time to time with an eye to their food value : but in the light of the more accurate information regarding agricultural matters which has been gleaned in recent years, several of those products appear to be deserving of special attention. One of these is INDIGOFERA GLANDULOSA, which is known under a variety of Vernacular names, such as Zinjroo, Befri and many others. In plain language, it is nothing more important than a wild indigo plant, and it flourishes in more or less profusion as an annual in many parts of India, often as a weed on very poor land.

Besides being cheap, the seeds are very nutritious, and, in some parts of India, particularly among Bhills, are used for food ; but being too rich to eat alone, are usually mixed with other grains. The seeds are dark green, small, roughly spherical, mottled with black, and have the appearance of miniature plover's eggs. They are very hard, have a bright yellow kernel, and a characterestic hottish taste. The plant is harvested in the same way as maize, cut, stacked dried, threshed and winnowed. The seeds are then ground into flour, mixed with other ingredients and made into bread, which is somewhat bitter but could no doubt with the exercise of a little ingenuity, be made palatable, or even appetising. In Berar, and probably in other parts of India, the seed is eaten raw, and is there known as BARBATI or JUNGLI-METHI.

As we have already said, INDIGOFERA GLANDULOSA is a highly nutritious food. In AGRICULTURAL LEDGER No. 84, which deals with famine foods, Dr. D. Noel-Paton and Dr. J. C. Dunlop, by whom it was compiled, state that the seed contains no less than 36 per cent of proteid, or three times more than is found on average cereals. They give the following analysis by Professor Church, which, they explain, corresponds closely with theirs, except that they find the proteid value somewhat higher and the carbohydrate value correspondingly less :—

Water ...	8·2
Albuminoids ...	31·9
Carbohydrates ...	46·7
Oil ...	2·2
Fibre ...	7·8
Ash ...	3·2
Total ...	100·0

What is also of importance is that they find that the proteids are as fully digested as those of wheat. In the analysis just given, it will be noticed that the percentage of albuminoids is 31·9 ; in Indian wheat the percentage is only 13·5. With oatmeal the seeds of INDIGOFERA GLANDULOSA also compare very favourably, being 32 per cent more nutritious. In another table dealing with the relative digestibility of wheat and I. Glandulosa, Dr. Noel-Paton furnishes the following particulars :—

	Proteids		Carbohydrates	
	Percent in food	Percent digested	Percent in food	Percent digested
Wheat	10·18	84	71·0	45
Indigo Glandulosa	36·12	83	38·75	28

From this analysis it was deduced by a further experiment that the available proteids and carbohydrates in 100 parts of the products named would be :—

	Products.	*Carbohydrates.*
Wheat	8·5	31·9
I. Glandulosa	29·9	10·9

The relative available energy of the two products are calculated from the above table as follows :—

Wheat	166
I. Glandulosa	167

So that in the matter of energy both wheat and I. Glandulosa may be regarded as equal, a fact that forcibly illustrates the food value of the latter.

Now it has been ascertained that the excessive use of a single cereal seems to lower its digestibility. For instance, Dr. Dunlop found, when investigating the feeding of prisoners in Scottish prisons, that when oatmeal was used in moderate amount, it was readily digested; but, when moderation was exceeded, digestibility was greatly reduced. This seems to apply with special force to I. Glandulosa. It is singular among Indian foods in being too rich to be eaten alone, and this factor is probably sufficient to account for the allegations that it causes discomfort. But it supplies precisely that element which is in most defect in the diet of most Indian peoples, and it would be invaluable if mixed with poor grains such as rice, in which carbohydrates so greatly preponderate. A specific case of its value as a mixed diet is furnished in para 118 of the Report on the Administration of Baroda State for the year 1901, wherein it is stated that, acting on the suggestion of the Chief Medical Officer, the Famine Commissioner gave it a trial in the Singad Poor-house, with the result that the four adults and four children who were fed on it soon began to put on flesh.

These facts would seem to establish beyond doubt its value in times of scarcity and as such it deserves a wide distribution throughout what may be called the "Famine Zone," more particularly if, like some better known species of INDIGOFERA, the plant can be profitably used as a green manure in a good season. Strange as it may appear, there does not seem to have ever been any systematic cultivation even on a small scale, of this interesting product. Perhaps the perusal of this article may induce some Director of Agriculture to remove this reproach, so that it may be definitely ascertained how far the plant responds to intensive cultivation, and what are the best conditions of growth and the normal yield of seed per acre. Without such data, it would be idle to speculate whether Indigofera Glandulosa deserves to be regarded as something more than a famine food."